

THE PACIFICUS GROUP OF COSSONUS  
(COLEOPTERA: CURCULIONIDÆ)

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For many years the name *Cossonus subareatus* Boheman has been applied in American literature to long-beaked specimens from northern and mid-western parts of the United States. Boheman's original description, however, calls for a species from Philadelphia, of the size and shape of *cylicus*, having the rostrum short, thick and half again as long as the head; pronotum lightly convex and with a sparsely punctulate plaga each side. These and other statements in the description fit *platalea* Say in a general way, though nothing is said of a pronotal flattening, a characteristic feature of Say's species. The allocation is doubtful, but at present it seems best to place *subareatus* Boh. as a synonym of *platalea* Say. At any rate, it is clear that Boheman's description cannot apply to any of the three forms here treated.

Besides *pacificus* Van Dyke, the long-beaked specimens at hand (*subareatus* of American authors; not Boheman, Gen. et sp. Curc., VIII, 2, 1845, p. 266) represent two species, both apparently undescribed. One is closely related to, and perhaps only an American subspecies of, the European *parellelepipedus* Hbst.; the other is a near ally of *pacificus*.

## Key to species of pacificus group.

1. Rostrum relatively long, slender, and strongly widened apically, the rostral length (from front margin of eye to apex of mandible) 3 to 4 times greater than the least rostral width, the latter about five-eighths that of the greatest width; basal margin of pronotum truncate or fully bisinuate; at least hind tibia of ♂ thickest (dorso-ventrally) at about basal two-fifths, where the lower edge in profile is convex and broadly rounded to subangulate, the edge from there to apex with a conspicuous fringe of golden hairs; hind tibia of ♀ moderately to strongly sinuate along lower edge and with a sparse fringe.....2
- Rostrum shorter and stouter, its length less than three, and sometimes less than two, times greater than its least width, the latter usually more than five-eighths that of the greatest width; basal margin of pronotum feebly to strongly bisinuate; hind tibia, ♂ and ♀, as thick or thicker at apex than elsewhere, slender (as in *platalea*) to shorter and thicker (as in *corti-*

- cola*), subevenly and gradually thickened from base to apex, or with the lower edge feebly to moderately sinuate, this edge usually with only the normal clothing of scattered hairs (in *lupini* with a sparse fringe).....*rest of the genus*.
2. Pronotum feebly convex (often sub-planate medio-basally), finely alutaceous, punctures subevenly distributed, those each side of median line toward base only slightly to moderately larger, basal margin usually truncate or nearly so; rostrum longer and more slender, the apical dilation (from its beginning to mandibular apex) usually at least as long as broad; base of abdomen (♂) densely pilose. Southern Canada and Northern United States.....*americanus*, new species.
- . Pronotum flattened and polished on disk, minutely alutaceous laterally, punctures conspicuously uneven in size and distribution, basal margin feebly bisinuate; rostrum stouter, the apical dilation quadrangular or slightly transverse; base of abdomen (♂) not pilose.....3
3. Length, 4-6.5 mm.; color usually black; anterior femur more strongly clavate; posterior tibia (♂) abruptly and strongly thickened at about basal third, the lower edge from there to apex with a dense fringe of long, golden hairs some of which are at least one-fourth as long as the tibia, the fringe extending on to basal two or three segments of tarsus. California to British Columbia, east to Quebec; also Arizona and Colorado .....*pacificus* Van Dyke
- . Length, 4-5.4 mm.; elytra reddish; ♂ tibia similarly but more feebly thickened, the hairs of the fringe much shorter. Kansas, Missouri, Dakota.....*rufipennis*, new species

***Cossonus americanus* Buchanan, new species**  
(*subareatus* authors [part], not Boheman)

Length, 4.5-6.5 mm.; width, 1.3-2 mm. Black or piceous-black, the antennæ, legs, and apex of rostrum more or less reddish, the elytra sometimes obscure rufous laterally; occasionally the body is reddish-brown throughout. Head, rostrum, and pronotum finely alutaceous, moderately shiny. Rostrum (from front edge of eye to apex of mandibles) about two-thirds as long as prothorax, dilated apical portion distinctly shorter than basal portion. Middle and hind tibiæ of ♂ rather abruptly thickened at about basal three-sevenths, the hairs of the fringe rather long on hind tibia (shorter than in *pacificus*, longer than in *rufipennis*); lower edge of ♂ femora fringed with inclined, golden hairs in basal half, the fringe densest on hind femur, sparse to obsolescent on front femur.

Head sparsely punctulate, frontal puncture distinct, eye lightly convex. Rostrum feebly arcuate, in side view subcontinuous with front, rather strongly tapering from base to middle, then feebly so to apex, side before eye somewhat unevenly and closely punc-

tate and with very fine, sparse, prostrate, transversely directed, pale hairs; rostrum above narrowest at about basal third, the dilated apical portion two-thirds or more as wide as the width of head across eyes, punctures fine, sparse to rather close, finer toward apex. First segment of funicle longer than the second, which is longer than the third, the distal segments widened, the seventh strongly transverse. Prothorax about as long as wide, subapical constriction usually rather deep, sides usually with a slight constriction near base, thence rounded divergent to widest point about basal third, then feebly convergent and rounded (or nearly straight) to about apical third; pronotum with a narrow, smooth, median line from base to middle or beyond, the line sometimes feebly raised, especially basally, punctures rather small, not dense, some of them longitudinally elliptical, those in basal half along each side of median line and along side margins more or less distinctly larger than those between. Elytra averaging about one-fifth or one-sixth wider than prothorax, base subtruncate or faintly bisinuate, serial punctures small, narrower than intervals, the latter lightly convex and each with a row of minute punctures. Beneath finely alutaceous; ♂ with first sternite broadly, the second more narrowly, impressed, the impression densely and finely punctate and clothed with long, inclined, golden hairs.

*Type locality:* Duparquet, Quebec, Canada, July 3, 1935, *Populus balsamifera*, G. Stace Smith.

Other localities: Michigan (Escanaba, Marquette, and Whitefish Point, Hubbard and Schwarz collection; "Mic. & "Mich"., Casey collection); Wisconsin (Bayfield, Wickham); Colorado (Buena Vista, July 1-6, 1896, 7,900-8,000 ft., H. F. Wickham; Ouray, July 1-15, 1897, 7,500-8,000 ft., H. F. Wickham); Washington (Hoquiam, *Picea sitchensis*, Burke, Hopk. 2037a); California (Fieldbrook, May 26, 1903, H. S. Barber; Lake Tahoe, Casey Coll.)

*Type*, ♂, 51384, U. S. National Museum. Paratypes returned to Mr. G. Stace Smith.

Described from 68 specimens of which 49 were collected at the type locality by Mr. Smith. The females outnumber the males by about 3 to 1. Distinctive characters are the long rostrum, finely alutaceous derm (except on elytra), relatively fine, sparse, and subeven pronotal punctures, and the male sexual characters.

At favorable angles the alutaceous sculpture of the pronotal derm is perceptible at about 20x, at which magnification the pronotum of all other North American species appears polished.

The hair fringe on male femora, and the hairy area at base of male abdomen, also are unique characters among the species of this fauna. Differs from the European *parallelepipedus* Hbst. in having the dorsal punctures slightly coarser, the rostrum still more feebly arcuate, and the tibiæ rather more strongly thickened. The genitalia of one male of each form has been examined; in *parallelepipedus*, the median lobe is parallel-sided basally and very broadly rounded at apex, while in *americanus* the median lobe is somewhat narrowed basally and more narrowly rounded at apex.

The two California specimens have the pronotum more convex and more strongly rounded at sides than is normal, and one of them (from Fieldbrook) is unusually large (6.5 mm. long). In a few specimens the elytra are narrower, being only about one-eighth wider than the prothorax.

#### COSSONUS PACIFICUS Van Dyke

Of this species, the National Museum collection contains specimens from Tallac, California (type locality); "Cal."; Ashford and Skokomish River, Washington ("W. T."=Washington); Creston, B. C.; Duparquet, Quebec; Ouray, Colorado; Utah; Arizona. Host trees are given as *Populus tremuloides* (Tallac specimens), *Populus trichocarpa* (Ashford specimens) and *Populus* (Duparquet specimens). At its thickest point at about basal third, the ♂ hind tibia is twice as thick as at base. The dense hair fringe on the ♂ hind tibia is divided, or broadly parted, longitudinally at its midde, giving the appearance of a double fringe. The lower edge of the hind femur of the ♂ is feebly transversely impressed at about the middle, showing as a shallow emargination in profile view. Of the 27 specimens seen four are males.

#### *Cossonus rufipennis* Buchanan, new species (*subareatus* authors [part], not Boheman)

Length, 4.2-5.4 mm.; width, 1.3-1.5 mm. Blackish, polished, the elytra, legs, antennæ, and apex of rostrum reddish. Disk of pronotum flat. Hind tibia of ♂ thickened at about basal two-fifths, the lower edge from there to apex with a fringe of golden hair; ♂ middle tibia and ♀ hind tibia sinuate, the fringe formed by shorter hairs.



Head very sparsely punctulate on vertex, sparsely and finely punctate on front, frontal puncture distinct, eyes lightly convex. Rostrum, from front edge of eye to apex about four-sevenths as long as pronotum, in side view feebly arcuate, subcontinuous with front, slightly to scarcely tapering from base to middle, more strongly tapering apically, above finely and rather sparsely punctate, the punctures finer and usually denser on the dilated apical portion which is slightly transverse and shorter than the stem of the rostrum; side of rostrum with punctures and pubescence a little finer and sparser than in *americanus*. Antenna about as in *americanus*. Prothorax subquadrate, widest behind middle, rather deeply and abruptly constricted near apex, slightly so near base, sides converging and nearly straight from about basal to apical third; disk of pronotum with a large, longitudinally ovate polished flattening, broader at base, where it covers one-half to two-thirds the pronotal width, reaching from base nearly or quite to apical collar, the derm laterad of this area minutely alutaceous; median smooth line reaching from base to near apex, the line with vague or sinuous outlines, much wider at and behind middle, narrower in apical half and usually narrowed again at base; the punctures each side of median line extremely coarse, especially toward base, the punctures along side margins moderate in size, the punctures between (i.e., in a broad longitudinal area opposite third and fourth elytral intervals) abruptly very fine and sparse in about basal third, becoming gradually coarser anteriorly. Elytra feebly bisinuate at base, about one-sixth wider than prothorax, serial punctures coarse but well separated, in places almost or quite as wide as an interval, the intervals faintly convex on disk, more strongly so on apical declivity, each minutely, uniseriately punctate. First and second sternites coarsely punctate, the punctures denser at sides, fifth sternite sparsely and more finely punctate.

*Type*, male, 51385, U. S. National Museum.

*Type locality*: Salina, Kansas.

Other localities: "Kans."; "Ks." (Casey coll.); "Dak."; St. Joseph, Missouri.

Thirteen specimens (♂ & ♀), one of them without locality label.

Very close to *pacificus* Van Dyke, the two sometimes scarcely distinguishable in the female sex. In general, *pacificus* is larger, the elytra usually black or piceous-black, the pronotum less flattened, the pronotal punctures each side of median line (also those in serial rows of elytra) a little smaller, the sides of the prothorax a trifle more rounded-convergent forward, the rostrum above a little more strongly punctate, the anterior femur more

abruptly clavate. In the absence of males, the reddish elytra and the habitat will perhaps make *rufipennis* identifiable in most cases. In *rufipennis* the lower edge of the fore femur in profile is broadly rounded at the summit of the femoral swelling, whereas in *pacificus* the swelling is more abruptly formed, its summit in profile more narrowly rounded to almost angulate.

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## TWO NEW LEAFHOPPERS FROM TROPICAL AMERICA

BY P. W. OMAN\*

The two Cicadellidæ here described are of unusual interest in that they represent groups not heretofore known to occur in America. Both appear to have their nearest allies in the Oriental Region, but neither can be associated satisfactorily with any described species. Thanks are due to Mr. C. H. Ballou of San José, Costa Rica, and Dr. W. A. Hoffman of San Juan, Puerto Rico, for sending the specimens upon which the descriptions are based.

### *Neonirvana* Oman, new genus

Medium sized leafhoppers, approximately 5-7 mm. in length, somewhat flattened dorso-ventrally, related to *Nirvana* Kirkaldy and *Ophiuchus* Distant<sup>1</sup> in general form and structure of the head, but differing from both in the absence of a median carina on the front and in the presence of a closed anteapical cell in the fore wing. Resembling *Nirvana* in the structure of the face, but with the head broader, especially anteriorly. Much like *Ophiuchus* in the structure of the crown but with the face less flattened.

Crown nearly flat, anterior margin slightly elevated, entire anterior and lateral margins of crown separated from front by a distinct carina which extends to eyes laterally. Median length of crown slightly greater than greatest width. Ocelli situated near lateral margins of crown, some distance in front of inner margins of eyes (Fig. 1, A). Face broad and slightly convex, antennal pits and facial sclerites typical of the subfamily. Lateral pronotal carinæ distinct, posterior margin of pronotum shallowly and

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<sup>1</sup> The writer has not examined the genotype of either *Nirvana* or *Ophiuchus*, but accepts Baker's characterization of the two genera (see Philippine Jour. Sci., vol. 23, p. 345-405, 1923).